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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,586	09/15/2003	Jon Raymond Groh	131908/11887 (21635-0107)	9320
31450	7590	09/09/2005	EXAMINER	
MCNEES WALLACE & NURICK LLC 100 PINE STREET P.O. BOX 1166 HARRISBURG, PA 17108-1166			SHEEHAN, JOHN P	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/662,586

Applicant(s)

GROH ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date Sept. 15, 2003
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilman et al. (Tilman, US Patent No. 5,328,659, cited in the IDS submitted September 15, 2003) taken in view of the ASM Handbook (cited by the Examiner in this Office action).

Tilman teaches a process of treating nickel base super alloys so as to reduce cracking comprising solution heat treating the nickel base superalloy at a solutionizing temperature above the gamma solvus temperature, cooling, i.e., quenching the solutionized nickel base alloy to below the gamma solvus temperature, further cooling, i.e. quenching the cooled nickel base superalloy to room temperature as recited in claim 9, solution heat treating and fast cooling, i.e., precipitation heat treating and aging the alloy (column 2, lines 30 to 55). The process steps taught by Tilman are the same process steps as are recited in applicants' claims.

The ASM Handbook teaches that molten salt baths are known quenchants (page 476, middle column, under item heading 3 and page 481, right column under the

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heading, "Isothermal Quenching....) and that the use of a salt bath as a quenchant reduces distortion of the workpiece that is to be quenched (page 475, middle column, under the heading "Control of Distortion").

Tilman and the claims differ in that Tilman does not teach the use of a molten salt bath as a quenchant in the quenching steps.

However, one of ordinary skill in the art at the time the invention was made would have been motivated to employ molten salt baths as the quenchant in Tilman's process so as to reduce distortion of the workpiece as taught by the ASM Handbook.

3. Claims 2 to 8 and 10 to 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilman et al. (Tilman, US Patent No. 5,328,659, cited in the IDS submitted September 15, 2003) taken in view of the ASM Handbook (cited by the Examiner in this Office action).

Tilman and the ASM handbook teach and are applied as set forth above.

The claims and Tilman differ in that Tilman does not teach the specific work piece dimensions recited in applicants' claims 3 to 5, the recited crystal grain size recited in claim 2 nor the specific process operating conditions recited in claims 6 to 8 and 10 to 12.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made because none of the features recited in claims 2 to 6 are considered to lend patentability to the claimed process but rather are considered to be merely workpiece and product characteristics that are determined by the desired

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product that one wishes to produce. This is considered to be particularly true in view of the fact that applicants' have not attached any criticality or novelty to these features.

Regarding the process operating conditions recited in claims 6 to 8 and 10 to 12, it is the Examiner's position that in view of Tilman's enabling disclosure the appropriate process operating conditions to treat a workpiece and produce a desired product would easily be determined. i.e. would be obvious.

4. Claims 13 to 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilman et al. (Tilman, US Patent No. 5,328,659, cited in the IDS submitted September 15, 2003) taken in view of the ASM Handbook (cited by the Examiner in this Office action).

Tilman and the ASM handbook teach and are applied as set forth above.

The claims and Tilman differ in that Tilman does not teach the specific work piece dimensions recited in applicants' claim 15, the microstructure recited in claims 14 and 17 nor the specific process operating conditions recited in claims 13, 16 and 18.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made because none of the features recited in claims 14, 15 and 17 are considered to lend patentability to the claimed process but rather are considered to be merely workpiece and product characteristics that are determined by the desired product that one wishes to produce. This is considered to be particularly true in view of the fact that applicants' have not attached any criticality or novelty to these features.

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Regarding the process operating conditions recited in claims 13, 16 and 18, it is the Examiner's position that in view of Tilman's enabling disclosure the appropriate process operating conditions to treat a workpiece and produce a desired product would easily be determined. i.e. would be obvious.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John P. Sheehan  
Primary Examiner  
Art Unit 1742

jps